

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) Apparatus for full duplex wireless communication of information, comprising:

means for performing at least one of modulating and demodulating information signals, the modulated information signal being boosted in power using a plurality of 90° hybrids arranged in tandem to output a plurality of amplification channels;

means for information transmission/reception, said information transmission/reception means providing for information transmission using a first polarization and for information reception using a second polarization to thereby isolate information transmission from information reception in full duplex communication, ~~wherein said means for information transmission/reception provides for information transmission and information reception using a common frequency;~~

regulator means having at least one DC voltage regulator for providing at least two DC output voltages, wherein one of the at least two DC output voltages is a negative voltage; and

means for inhibiting a first of said two DC voltage outputs when ~~[[a second]]~~ the negative voltage of said at least two DC ~~voltage outputs~~ output voltages is above a predetermined threshold.

2. (Original) Apparatus according to claim 1, wherein said performing means further includes:

a modulating means having a data input means, a data processing means, and a power output means.

3. - 10. (Canceled)

11. (Original) Apparatus according to claim 1, wherein said information transmission/reception means includes:

a transmission antenna; and

a reception antenna separated by a distance from said transmission antenna.

12. (Original) Apparatus according to claim 1, wherein said information transmission/reception means further includes:

a single antenna having a dual polarization capability for transmitting information with a first polarization, and for receiving information with a second polarization.

13. - 18. (Canceled)

19. (Currently Amended) A method for full duplex wireless communication of information in a system having a modulator and a demodulator, the method comprising the steps of:

performing at least one of modulating and demodulating information signals,
the modulated information signal being boosted in power using a plurality of 90°
hybrids arranged in tandem to output a plurality of amplification channels;

isolating transmission/reception of information by transmitting information with
a first polarization and by receiving information with a second polarization in full
duplex communication, ~~wherein said information transmission and said information
reception are performed over a common frequency;~~

providing a positive regulated DC output voltage and a ~~[[second]]~~ negative
regulated DC output voltage to the modulator and demodulator; and

inhibiting an output of said positive regulated DC output voltage when said
~~[[second]]~~ negative regulated DC output voltage is above a predetermined threshold.

20. - 24. (Canceled)

25. (Original) A method according to claim 19, wherein said step of
isolating transmission/reception of information further includes the steps of:

transmitting information signals via a transmission antenna; and

receiving information signals via a reception antenna separated by a distance
from said transmission antenna.

26. (Previously Presented) A method according to claim 19, wherein said
step of isolating transmission/reception of information, further includes a step of:

transmitting information via a dual polarization antenna using a first polarization, and receiving information with a second polarization via said dual polarization antenna.

27. - 28. (Canceled)

29. (Currently Amended) A transceiver for full duplex wireless communication of information, comprising:

at least one of a modulator for modulating information and a demodulator for demodulating information, the modulated information being boosted in power using a plurality of 90° hybrids arranged in tandem to output a plurality of amplification channels;

a dual polarization antenna for transmitting said information with a first polarization, and for receiving information with a second polarization opposite to said first polarization in full duplex communication;

at least one DC voltage regulator producing at least two DC voltage outputs, wherein the at least one DC voltage regulator includes a negative voltage regulator;
and

a switch for inhibiting a first of said at least two DC output voltages when a second of said at least two DC voltage outputs from the negative voltage regulator is above a predetermined threshold.

30. - 35. (Canceled)

36. (Original) A transceiver according to claim 29, wherein said dual polarization antenna includes:

- a transmission antenna; and
- a reception antenna separated by a distance from said transmission antenna.

37. (Previously Presented) A transceiver according to claim 29, wherein said dual polarization antenna includes:

- a single antenna having a dual polarization capability for transmitting information with a first polarization, and for receiving information with a second polarization.

38. - 39. (Canceled)

40. (Original) A transceiver according to claim 29, further including:

- both said modulator and said demodulator.

41. – 75. (Cancelled)

76. (Previously Presented) Apparatus according to claim 11, wherein said data input means is configured to receive data modulated on an intermediate frequency of 2-3 GHz.

77. (Previously Presented) Apparatus according to claim 76, further including:

a local oscillator for modulating said data with a frequency on the order of 18 GHz.

78. (Previously Presented) Apparatus according to claim 76, wherein said power output means further includes:

plural, parallel amplification channels.

79. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least one coupler for splitting a signal from said data processing means into said plural, parallel amplification channels.

80. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least three couplers for splitting an output from said data processing means into four separate amplification channels, said output from said data processing means being amplified to produce at least about a 0.5 W output in each of said channels.

81. (Previously Presented) Apparatus according to claim 78, wherein said power output means further includes:

at least one device for combining outputs from each of said plural, parallel amplification channels into a single output channel.

82. (Previously Presented) Apparatus according to claim 79, wherein said at least one coupler is a 90° hybrid.

83. (Previously Presented) Apparatus according to claim 79, wherein said power output means further includes:

at least one coupler for combining outputs from said plural, parallel amplification channels into a single output channel.

84. - 85. (Canceled)

86. (Previously Presented) Apparatus according to claim 11, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

87. (Previously Presented) Apparatus according to claim 11, wherein said performing means further includes:

a demodulating means having a data input means and a data processing means.

88. (Previously Presented) Apparatus according to claim 87, further including:

a local oscillator for supplying a modulating signal to said modulating means, and for providing a demodulating signal to said demodulating means.

89. (Previously Presented) Apparatus according to claim 87, further including:

hermetically sealed housings for containing components of a transceiver, components of said modulating means and said demodulating means being mounted directly to said hermitically sealed housings.

90. (Previously Presented) A method according to claim 25, wherein said step of performing at least one of modulating and demodulating information signals includes:

using an intermediate frequency of 2-3 GHz.

91. (Previously Presented) A method according to claim 90, wherein said step of performing at least one of modulating and demodulating information signals further includes a step of:

modulating said intermediate frequency using a local oscillator frequency on the order of 18 GHz.

92. (Previously Presented) A method according to claim 25, wherein said step of performing further includes a step of:

modulating information for transmission as a modulated information signal;
and

splitting said modulated information signal into plural, parallel amplification channels.

93. (Previously Presented) A method according to claim 92, wherein said modulated information signal is split into four separate amplification channels, said modulated information signal being amplified in each of said four separate amplification channels to produce at least about a 0.5 W output in each of said channels.

94. (Previously Presented) A method according to claim 93, further including a step of:

combining outputs from each of said plural, parallel amplification channels into a single output channel.

95. - 96. (Canceled)

97. (Previously Presented) A transceiver according to claim 36, wherein said at least one of a modulator and a demodulator further includes:

a local oscillator for modulating an intermediate frequency of 2-3 GHz with a frequency on the order of 18 GHz.

98. (Previously Presented) A transceiver according to claim 36, wherein said modulator further includes:

plural, parallel amplification channels.

99. (Previously Presented) A transceiver according to claim 98, further comprising:

at least one coupler for establishing said plural, parallel amplification channels.

100. (Previously Presented) A transceiver according to claim 98, further comprising:

at least three couplers for establishing said plural, parallel amplification channels, each of said amplification channels producing at least about a 0.5 W output.

101. (Previously Presented) A transceiver according to claim 99, further comprising:

at least one device for combining outputs of each of said plural, parallel amplification channels into a single output channel.

102. (Previously Presented) A transceiver according to claim 100, wherein said couplers are 90° hybrids.

103. - 104. (Canceled)

105. (New) The apparatus according to claim 1, wherein the at least one DC voltage regulator of the regulator means includes a positive voltage regulator and a negative voltage regulator.

106. (New) The apparatus according to claim 105, wherein the positive voltage regulator produces a drain bias voltage and the negative voltage regulator produces a gate bias voltage.

107. (New) The apparatus according to claim 106, wherein the gate bias voltage is the negative voltage.

108. (New) The method according to claim 19, wherein the positive regulated DC output voltage is a drain bias voltage and the negative regulated DC output voltage is a gate bias voltage.

109. (New) The transceiver according to claim 29, wherein the at least one DC voltage regulator includes a positive voltage regulator that produces the first of said at least two DC output voltages.

110. (New) The transceiver according to claim 29, wherein the first of said at least two DC output voltages is a drain bias voltage.

111. (New) The transceiver according to claim 29, wherein the second of said at least two DC output voltages is a gate bias voltage.

112. (New) The transceiver according to claim 29, wherein the gate bias voltage is a negative voltage.